WHAT IS CLAIMED IS:

1. A method of making an array of materials, said method comprising:

(a) delivering a first component of a first material and a first component of a second material to first and second regions on a substrate; and

(b) delivering a second component of said first material and a second component of said second material to said first and second regions on said substrate;

whereby said components of said first material and said components of said second material interact to form at least two different materials.

2. The method as recited in claim **1** wherein said components interact with each other before coming into contact with said substrate.

3. The method as recited in claim **1** wherein said components interact with each other upon coming into contact on said substrate.

4. The method as recited in claim **1** wherein said components are delivered to said substrate in parallel.

5. The method as recited in claim **1** wherein said components are delivered to said substrate sequentially.

6. The method as recited in claim **1** wherein said first component of said first material and said second component of said first material are simultaneously delivered to said first region.

7. The method as recited in claim **1** wherein said first component of said first material and said first component of said second material are simultaneously delivered to said first region and said second region, respectively.

8. The method as recited in claim **1** wherein said first and second materials differ in a manner selected from the group consisting of composition, stoichiometry and thickness.

9. The method as recited in claim **1** wherein said components interact upon exposure to an external source selected from the group consisting of a chemical substance, energy, radiation, electricity, heat, pressure and voltage.

10. The method as recited in claim **1** wherein said first component of said first material and said first component of said second material are the same, but are offered in different amounts.

11. The method as recited in claim **1** wherein said second component of said first material and said second component of said second material are the same, but are offered in different amounts.

12. The method as recited in claim **1** wherein said first component of said first material is delivered to said first region in a gradient selected from the group consisting of a gradient of compositions, a gradient of stoichiometries and a gradient of thicknesses.

13. The method as recited in claim **1** wherein said materials are selected from the group consisting of layers, blends, mixtures and combinations thereof.

14. The method as recited in claim **1** wherein said array comprises at least 10 different materials.

15. The method as recited in claim **1** wherein said array comprises at least 20 different materials.

16. The method as recited in claim **1** wherein said array comprises at least 50 different materials.

17. The method as recited in claim **1** wherein said array comprises at least 100 different materials.

18. The method as recited in claim **1** wherein said array comprises at least 500 different materials.

19. The method as recited in claim **1** wherein said array comprises at least 1,000 different materials.

20. The method as recited in claim **1** wherein said array comprises at least 10,000 different materials.

21. The method as recited in claim **1** wherein said array comprises at least 100,000 different materials.

22. The method as recited in claim **1** wherein said array comprises at least 1,000,000 different materials.

23. The method as recited in claim **1** wherein said components are delivered using a delivery technique involving the use of a physical mask.

24. The method as recited in claim **1** wherein said components are delivered using a delivery technique selected from the group consisting of sputtering techniques, spraying techniques, laser ablation techniques, electron beam evaporation techniques, thermal evaporation techniques, ion-beam techniques, ion implantation techniques, doping techniques, chemical vapor deposition (CVD) techniques and liquid dispensing techniques.

25. The method as recited in claim **1** further comprising the step of screening said array of materials for a useful property.

26. The method as recited in claim **25** wherein said useful property is selected from the group consisting of electrical, thermal, mechanical, morphological, optical, magnetic and chemical properties.

27. The method as recited in claim **1** wherein said components of said first and second materials are delivered to said substrate in a pattern that allows for comparison of the performance of said materials for a selected function.

28. The method as recited in claim **27** wherein the selected function for each of said materials is the same.

29. The method as recited in claim **27** wherein a relative performance of each of said materials can be determined with respect to a useful property of said materials.

30. The method as recited in claim **1** wherein said first material comprises 3 components.

31. The method as recited in claim **1** wherein said first material comprises 4 components.

32. The method as recited in claim **1** wherein said first material comprises 5 components.

33. The method as recited in claim **1** wherein said first material comprises 6 components.

34. The method as recited in claim **1** wherein said first material comprises 7 components.

35. The method as recited in claim **1** wherein said first material comprises 8 components.

36. The method as recited in claim **1** wherein said second material comprises 3 components.

37. The method as recited in claim **1** wherein said second material comprises 4 components.

38. The method as recited in claim **1** wherein said second material comprises 5 components.

39. The method as recited in claim **1** wherein said second material comprises 6 components.

40. The method as recited in claim **1** wherein said second material comprises 7 components.

41. The method as recited in claim **1** wherein said second material comprises 8 components.